

**Notice of Allowability**

Application No.

09/675,541

Examiner

Qi Han

Applicant(s)

PAI, WAN-CHIEH

Art Unit

2654

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to amendment filed 10/07/2004.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date in this action.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This communication is responsive to the applicant's amendment dated 10/07/2004 (Paper 6). Applicant amended claims 1-3 and 11-13.
2. Examiner withdraws the claim objections regarding claims 4 and 11, since the corresponding limitation is found in the specification (page 7, lines 11-12).

### ***Response to Arguments***

3. Applicant's arguments, see page 6-9 (remarks) of the amendment, filed 10/07/2004, with respect to claims 1-7, 10-6 and 19 have been fully considered and are persuasive. The rejection of claims 1-7, 10-6 and 19 has been withdrawn.

### ***Examiner's Amendment***

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was proved by applicant representative, Martin R. Rader, through a telephone interview on 01/06/2005. The Examiner's Amendment is as following:

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**In the Specification:**

On page 5, line 8, replace the term " $H(z)$ " of the left side of the second equation with  $--H(n)--$ .

**In the Drawings:**

Replace the original drawing number "FIG. 6" with  $--FIG. 6A--$ ;

Replace the original drawing number "FIG. 6A" with  $--FIG. 6B--$ ;

Replace the original drawing number "FIG. 6B" with  $--FIG. 6C--$ .

The applicant representative also agrees to send the formal corrected copies of above drawings to the office (see the attachment of the examiner-amended drawings).

**-----end of Examiner's Amendment-----**

***Allowable Subject Matter***

5. Claims 1-19 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent **claims 1 and 11**, the instant application is directed to a method for generating a masking threshold level for reducing code quantization in a digital audio system, the threshold comprising both simultaneous masking and temporal masking effects on an audio signal to be coded. Each independent claim identifies the uniquely distinct features of:

a) providing a filter having a selected transfer function;

b) inputting simultaneous masking signals into the filter;

c) generating approximate replica temporal masking signals at the filter output;

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d) adding the simultaneous masking signals and the replica temporal masking signals to form a composite masking signal; and

e) using the composite masking signal to establish the masking threshold level.

The prior art of record, Hermansky et al. (US 5,450,522), Hollier et al. (US 5,848,384) and Theile et al. (US 4,972,484), provided numerous teachings and approaches of taking advantages of perceptual masking features, including using perceptual linear predictive (PLP), simulated critical-band masking curve, short-term spectrum warped into Bark frequency domain, the temporal filtering of the log critical band spectrum performed by IIR filter having high order transfer function and approximation of non-equal sensitivity of human hearing, providing exponential decay for the temporal masking, processing separate spectral masking thresholds and temporal masking thresholds, and obtaining total information regarding the spectral and temporal masking distributions. However, the combined features stated above, are not anticipated by, nor made obvious over the prior art of the record.

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. Any response to this action should be mailed to:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450  
**or faxed to:**

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(703) 872-9306, (for formal communications intended for entry)

**Or:**

(703) 872-9306, (for informal or draft communications, and please label "PROPOSED" or "DRAFT")

Patent Correspondence delivered by hand or delivery services, other than the USPS, should be addressed as follows and brought to U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA, 22202

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (703) 305-5631. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-6954.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh  
January 6, 2005

  
**RICHEMOND DORVIL**  
**SUPERVISORY PATENT EXAMINER**